First Hit Fwd Refs

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\*Generate Collection Print

L8: Entry 21 of 35

File: USPT

Nov 4, 1980

DOCUMENT-IDENTIFIER: US 4232152 A

\*\* See image for <u>Certificate of Correction</u> \*\*
TITLE: Amine salts of tertiary amino acids

## Brief Summary Text (31):

Examples of amine salts of Mannich type adducts include: bis-tri-n-propanolamine salt of bis (hydroxyethylamino) methyl malonic acid, diethanolamine salt of hydroxyethylamino methyl malonic acid, monomethylamine salt of bis (hydroxyethylamino) furfuryl malonic acid, bis-triethylenediamine salt of bis (hydroxyethylamino) benzyl malonic acid, bis-triethylenediamine salt of morpholino benzyl malonic acid, bis-dimethylamine salt of morpholine methyl malonic acid, methylamine salt of bis (piperidinylmethyl) acetic acid, bis-tri-n-propanolamine salt of diglycolamino methyl malonic acid, propanolamine salt of bis (piperidinylmethyl) acetic acid, triethanolamine salt of bis (imidazolo methyl) acetic acid, bis-trimethylamine salt of piperidinyl methyl malonic acid and triethylenediamine salt of morpholino benzyl cyanoacetic acid.

## Detailed Description Text (10):

Approximately 100 cc of methanol, 0.1 mols of <u>malonic acid</u>, 0.1 mols of <u>diethanolamine</u>, and 0.1 mols of furfuraldehyde were charged to a round bottom flask. The contents were refluxed for two hours, and then the methanol removed by evacuation. The product obtained was bis-(hydroxyethyl) furfuryl malonic acid.

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# Refine Search Search Results Terms [malonate or malonic) adj5 (amine adj2 salt)] 3

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US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

L10

Refine Search

Recall Text

# **Search History**

DATE: Tuesday, September 13, 2005 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB =	USPT, EPAB, JPAB, DWPI, TDBD; PLUR=YES; OP=OR		
<u>L10</u>	(malonate or malonic) adj5 (amine adj2 salt)	3	<u>L10</u>
<u>L9</u>	L8 and (cosmetic or sunscreen)	1	<u>L9</u>
<u>L8</u>	(malonate or malonic) adj5 (polyethyleneimine or \$ethanolamine or propanolamine or methylamine or ehtylamine or propylamine or isopropylamine or butylamine or pentylamine or hexylamine)	. 35	<u>L8</u>
<u>L7</u>	L4 and 424/\$.ccls.	2	<u>L7</u>
<u>L6</u>	L4 and cosmetic\$	3	<u>L6</u>
<u>L5</u>	L4 and sunscreen	0	<u>L5</u>
<u>L4</u>	(malonate or malonic) adj5 \$amine	167	<u>L4</u>
<u>L3</u>	(malonate or malonic) adj3 (salt) same sunscreen	1	<u>L3</u>
<u>L2</u>	L1 and \$butyl\$methoxydibenzoylmethane	10	<u>L2</u>
<u>L1</u>	(malonate or malonic) same sunscreen	35	<u>L1</u>

# **Refine Search**

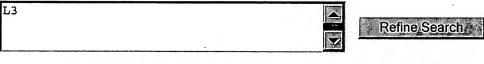
# Search Results -

. Terms	Documents
(malonate or malonic) adj3 (salt) same sunscreen	1

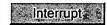
Database:

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EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:







# **Search History**

DATE: Tuesday, September 13, 2005 Printable Copy Create Case

Set Name	<u>Query</u>	<b>Hit Count</b>	Set Name
side by side			result set
DB=US	SPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=	:OR	
<u>L3</u>	(malonate or malonic) adj3 (salt) same sunscreen	1	<u>L3</u>
<u>L2</u>	L1 and \$butyl\$methoxydibenzoylmethane	10	<u>L2</u>
<u>L1</u>	(malonate or malonic) same sunscreen	35	<u>L1</u>

**END OF SEARCH HISTORY** 

## First Hit Fwd Refs

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L2: Entry 6 of 10 File: USPT May 1, 2001

DOCUMENT-IDENTIFIER: US 6224854 B1

\*\* See image for Certificate of Correction \*\*

TITLE: UV protection compositions

### Brief Summary Text (6):

Many conventional sunscreen products, in particular, are deficient, however, due to their inability to provide efficacious protection against broad spectrum UV radiation, i.e., protection against both UVB and UVA radiation. Today, most commercially available sunscreen products are efficient at absorbing UV radiation in the 290 nm to 320 nm UVB region such that sunburn of the skin is prevented. They are less efficient when it comes to absorbing light which falls in the 320 nm to 400 nm UVA region, which leaves the skin vulnerable to premature skin aging. This deficiency is due in part to the limited number of UVA absorbing sunscreen actives which are both commercially available and approved for global use. One class of these sunscreen actives includes dibenzoylmethane compounds which provide broad spectrum UV protection and 4-tert-butyl-4'-methoxydibenzoylmethane, in particular, is also approved for global use. Unfortunately, these sunscreens tend to photodegrade upon exposure to UV radiation thereby reducing their UVA efficacy. Consequently, sunscreen products which include these compounds are typically more difficult to formulate due to the inherent lack of photostability of dibenzoylmethane compounds. One approach to stabilize these types of sunscreens is described in U.S. Ser. No. 07/929,612, Deckner, filed Aug. 13, 1992, involving the use of benzylidene camphor sunscreens to stabilize the dibenzoylmethane compound. Such compositions, however, are not currently approved for global use on humans.

#### Brief Summary Text (31):

Suitable UVA-absorbing dibenzoylmethane sunscreen actives include, but are not limited to, those selected from the group consisting of 2-methyldibenzoylmethane, 4-methyldibenzoylmethane, 4-isopropyldibenzoylmethane, 4-tert-butyldibenzoylmethane, 2,4-dimethyldibenzoylmethane, 2,5-dimethyldibenzoylmethane, 4,4'-disopropylbenzoylmethane, 4-tert-butyl-4'-methoxydibenzoylmethane, 2-methyl-5-isopropyl-4'-methoxydibenzoylmethane, 2-methyl-5-tert-butyl-4'-methoxydibenzoylmethane, 2,4-dimethyl-4'-methoxydibenzoylmethane, 2,6-dimethyl-4'tert-butyl-4'methoxydibenzoylmethane, and mixtures thereof. Preferred UVA-absorbing dibenzoylmethane, and mixtures thereof. A more preferred UVA-absorbing dibenzoylmethane sunscreen active is 4-tert-butyl-4'-methoxydibenzoylmethane.

### Brief Summary Text (32):

The sunscreen active, 4-tert-butyl-4'-methoxydibenzoylmethane, which is also known as butyl methoxydibenzoylmethane or Avobenzone, is commercially available under the names Parsol.RTM. 1789 from Givaudan-Roure (International) S.A. (Basel, Switzerland) and Eusolex.RTM. 9020 from Merck & Co., Inc. (Whitehouse Station, N.J.). The sunscreen 4-isopropyldibenzoylmethane, which is also known as isopropyl dibenzoylmethane, is commercially available from Merck under the name Eusolex 8020.

CLAIMS:

- 7. The composition of claim 1 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 2-methyldibenzoylmethane, 4-methyldibenzoylmethane, 4-isopropyldibenzoylmethane, 4-tert-butyldibenzoylmethane, 2,4-dimethyldibenzoylmethane, 2,5-dimethyldibenzoylmethane, 4,4'-diisopropylbenzoylmethane, 4-tert-butyl-4'-5 methoxydibenzoylmethane, 2-methyl-5-isopropyl-4'-methoxydibenzoylmethane, 2-methyl-5-tert-butyl-4'-methoxydibenzoylmethane, 2,4-dimethyl-4'-methoxydibenzoylmethane, 2,6-dimethyl-4'tert-butyl-4'methoxydibenzoylmethane, and mixtures thereof.
- 8. The composition of claim 1 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 4-tert-butyl-4'-methoxydibenzoylmethane, isopropyldibenzoylmethane, and mixtures thereof.
- 9. The composition of claim 1 wherein the UVA-absorbing dibenzoylmethane sunscreen active is 4-tert-butyl-4'-methoxydibenzoylmethane.
- 14. The composition of claim 13 wherein the composition comprises from about 0.01% to about 30%, by weight of the composition, of the UVA-absorbing dibenzoylmethane sunscreen active and wherein the styrene derivative is selected from the group consisting of e-stilbene, z-stilbene, benzylidene malonitrile, ethyl-4-nitrocinnamate, diethyl benzalmalonate, dimethyl4-nitrobenzylidene malonate, and mixtures thereof.
- 15. The composition of claim 14 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 2-methyldibenzoylmethane, 4-methyldibenzoylmethane, 4-isopropyldibenzoylmethane, 4-tert-butyldibenzoylmethane, 2,4-dimethyldibenzoylmethane, 2,5-dimethyldibenzoylmethane, 4,4'-diisopropylbenzoylmethane, 4-tert-butyl4'-methoxydibenzoylmethane, 2-methyl-5-isopropyl-4'-methoxydibenzoylmethane, 2-methyl-5-tert-butyl-4'-methoxydibenzoylmethane, 2,4-dimethyl-4'-methoxydibenzoylmethane, 2,6-dimethyl-4'tert-butyl-4'methoxydibenzoylmethane, and mixtures thereof.
- 19. The composition of claim 18 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 4-tert-butyl-4'-methoxydibenzoylmethane, isopropyldibenzoylmethane, and mixtures thereof.

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L2: Entry 8 of 10

File: USPT

Mar 15, 1988

DOCUMENT-IDENTIFIER: US 4731242 A

TITLE: Waterproof sunscreen compositions

## Brief Summary Text (33):

Polyamide useful in forming the long lasting sunscreen composition of this invention may be polymers formed from the raction of polyamines with a polybasic acid. Methods of preparing these polyamides by condensation of polyamines and polycarboxylic acids or anhydrides are well known in the art and need not be described here. The polyamides may be derived from such polyamines as ethylenediamine, diethylene-triamine, triethylenetetramine, tetraethylenepentamine, propylenediamine, 1,4-diaminobutane, 1,3-diaminobutane, hexamethylenediamine, 3,3iminobispropylamine and the like. Typical polycarboxylic acids which may be condensed with the polyamines to form the desired polyamide are oxalic, malonic, succinic, glutaric, adipic, palmitic, suberic, azelaic, sebacic, malic, phthalic, cyclohexandicarboxylic, and the like as well as their isomers, homologs and andydrides. Alternately, or in addition to the above polycarboxylic acids, the polyamide may be formed from unsaturated polycarboxylic acids or anhydrides such as maleic, fumaric, citraconic and itaconic acids and the like.

#### Brief Summary Text (36):

Any active sunscreen agent, capable of absorbing the harmful effects of ultraviolet radiation which, in non-irritating, non-toxic and is compatible with the ingredients used in the composition and which when applied to the skin are homogeneously dispersed throughout the film formed by the polyamide resin polymer, can be used. Active sunscreen agents that met these criteria are: PABA (paraaminobenzoic acid); Cinoxate (2-ethoxyethyl p-methoxycinnamate); diethanolamine pmethoxycinnamate; digalloyl trioleate; Dioxybenzone (2,2'-dihydroxy-4methoxybenzophenone); ethyl 4-[bis(hydroxypropyl)]- aminobenzoate; 2-ethylhexyl 2cyano-3,3-diphenylacrylate; ethylhexyl p-methoxycinnamate; 2-ethylhexyl salicylate; glyceryl aminobenzoate; Homosalate (3,3,5-trimethylcyclohexyl salicylate); Menthyl Anthranilate (menthyl o-aminobenzoate); Oxybenzone (2-hydroxy-4methoxybenzophenone); Padimate A (amyl p-dimethylaminobenzoate); 2phenylbenzimidazole-5-sulfonic acid; Sulisonbenzone (5-benzovl-4-hydroxy-2methoxybenzenesulfonic acid); triethanolamine salicylate; 4-Tert. butyl-4methoxydibenzoylmethane; and benzalphthalide.

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# **Hit List**



Search Results - Record(s) 1 through 10 of 10 returned.

☐ 1. Document ID: US 6926887 B2

Using default format because multiple data bases are involved.

L2: Entry 1 of 10

File: USPT

Aug 9, 2005

US-PAT-NO: 6926887

DOCUMENT-IDENTIFIER: US 6926887 B2

TITLE: Photostabilizers, UV absorbers, and methods of photostabilizing a sunscreen

composition

DATE-ISSUED: August 9, 2005

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Bonda; Craig A.

Pavlovic; Anna B.

Winfield

Elmwood Park

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ΙL

US-CL-CURRENT: 424/60; 424/59, 558/400, 560/81

Full Title Citation Front Review Classification Date Reference 1995 Claims 1990 Dra	Full Title	Citation	Front	Review	Classification	Date	Reference			Claima	Dot	Orand
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☐ 2. Document ID: US 6919473 B2

L2: Entry 2 of 10

File: USPT

Jul 19, 2005

US-PAT-NO: 6919473

DOCUMENT-IDENTIFIER: US 6919473 B2

TITLE: Photostabilizers, UV absorbers, and methods of photostabilizing a sunscreen

composition

DATE-ISSUED: July 19, 2005

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Bonda; Craig A.

Winfield

IL

Pavlovic; Anna B.

Elmwood Park

 $_{
m IL}$ 

US-CL-CURRENT: 560/8; 560/19

☐ 3. Document ID: US 6800274 B2

L2: Entry 3 of 10

File: USPT

Oct 5, 2004

US-PAT-NO: 6800274

DOCUMENT-IDENTIFIER: US 6800274 B2

\*\* See image for Certificate of Correction \*\*

TITLE: Photostabilizers, UV absorbers, and methods of photostabilizing a sunscreen

composition

DATE-ISSUED: October 5, 2004

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Bonda; Craig A. Winfield IL
Pavlovic; Anna B. Elmwood Park IL
Shah; Urvil B. Mokena IL

US-CL-CURRENT:  $\underline{424}/\underline{60}$ ;  $\underline{424}/\underline{59}$ ,  $\underline{558}/\underline{400}$ ,  $\underline{560}/\underline{81}$ 

Full Title Citation Front Review Classification Date Reference Common Common Claims Notice Draw De

☐ 4. Document ID: US 6488915 B1

L2: Entry 4 of 10

File: USPT

Dec 3, 2002

US-PAT-NO: 6488915

DOCUMENT-IDENTIFIER: US 6488915 B1

\*\* See image for <u>Certificate of Correction</u> \*\*

TITLE: Use of <u>sunscreen</u> combinations which comprise, as essential constituent, 2-(4-alkoxyanilinomethylene) <u>malonic</u> dialkyl esters as photostable UV filters in cosmetic and pharmaceutical preparations

DATE-ISSUED: December 3, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Heidenfelder; ThomasRomerberg-MechtersheimDETiefensee; KristinBad DuerkheimDEWunsch; ThomasSpeyerDE

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full Title Citation Front Review Classification Date Reference

☐ 5. Document ID: US 6290938 B1

L2: Entry 5 of 10

File: USPT

Sep 18, 2001

US-PAT-NO: 6290938

DOCUMENT-IDENTIFIER: US 6290938 B1

TITLE: Sunscreen compositions

DATE-ISSUED: September 18, 2001

INVENTOR-INFORMATION:

NAME

Maineville

STATE ZIP CODE COUNTRY

Tanner; Paul Robert Irwin; Christopher

Cincinnati

ОН

O'Donoghue; Margaret Ann

Monroe

CITY

OH

OH

US-CL-CURRENT: <u>424/59</u>; <u>424/400</u>, <u>424/401</u>, <u>424/60</u>

Full Title Citation Front Review Classification Date Reference

☐ 6. Document ID: US 6224854 B1

L2: Entry 6 of 10

File: USPT

May 1, 2001

US-PAT-NO: 6224854

DOCUMENT-IDENTIFIER: US 6224854 B1

\*\* See image for Certificate of Correction \*\*

TITLE: UV protection compositions

DATE-ISSUED: May 1, 2001

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Robinson; Larry Richard

Loveland

OH

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full Title Citation Front Review Classification Date Reference Company Company

☐ 7. Document ID: US 6132703 A

L2: Entry 7 of 10

File: USPT

Oct 17, 2000

US-PAT-NO: 6132703

DOCUMENT-IDENTIFIER: US 6132703 A

\*\* See image for <u>Certificate of Correction</u> \*\*

TITLE: Cosmetic and pharmaceutical preparations containing photostable UV filters

DATE-ISSUED: October 17, 2000

Record List Display Page 4 of 5

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Habeck; Thorsten Meckenheim DE Krause; Alfred Speyer DE

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full Title Citation Front Review Classification Date Reference

□ 8. Document ID: US 4731242 A

L2: Entry 8 of 10 File: USPT Mar 15, 1988

US-PAT-NO: 4731242

DOCUMENT-IDENTIFIER: US 4731242 A

TITLE: Waterproof sunscreen compositions

DATE-ISSUED: March 15, 1988

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Palinczar; Victor Trenton NJ 08611

US-CL-CURRENT: 424/59; 424/60

Full Title Citation Front Review Classification Date Reference Market Claims Chaires Comp. Draw, Dr

☐ 9. Document ID: WO 3099250 A1

L2: Entry 9 of 10 File: EPAB Dec 4, 2003

PUB-NO: WO003099250A1

DOCUMENT-IDENTIFIER: WO 3099250 A1

TITLE: SUNSCREEN COSMETIC COMPOSITIONS STORAGE STABILIZED WITH MALONATE SALTS

PUBN-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME

ZHANG, JOANNA HONG

FARYNIARZ, JOSEPH RAYMOND CHENEY, MICHAEL CHARLES

INT-CL (IPC): A61 K 7/44

EUR-CL (EPC): A61K008/02; A61K008/04, A61K008/35 , A61K008/362 , A61K008/41 , A61K008/41 , A61Q001/02 , A61Q001/12 , A61Q017/04 , A61Q019/00 , A61Q019/08 ,

A61Q019/10

Full Title Citation Front Review Classification Date Reference Caracter Claims KimC Draw De

☐ 10. Document ID: US 6926887 B2, US 20040057912 A1, AU 2003275192 A1, EP 1539064 A2

L2: Entry 10 of 10

File: DWPI

Aug 9, 2005

DERWENT-ACC-NO: 2004-327667

DERWENT-WEEK: 200552

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TITLE: Composition useful as <u>sunscreen</u> for protecting human skin from ultraviolet radiation comprises a photoactive compound and (new) fluorene derivative containing

diesters or polyesters of diphenylmethylene malonic acid

INVENTOR: BONDA, C A; PAVLOVIC, A; SHAH, U B; PAVLOVIC, A B

PRIORITY-DATA: 2002US-0246434 (September 17, 2002), 2002US-0302423 (November 22,

2002)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 6926887 B2</u>	August 9, 2005		000	A61K007/64
US 20040057912 A1	March 25, 2004		027	A61K007/42
AU 2003275192 A1	April 8, 2004		000	A61F007/00
EP 1539064 A2	June 15, 2005	E	000	A61F007/00

INT-CL (IPC): A61 F  $\frac{7}{00}$ ; A61 K  $\frac{7}{42}$ ; A61 K  $\frac{7}{64}$ ; C08 F  $\frac{12}{32}$ ; C08 F  $\frac{32}{04}$ ; C08 F  $\frac{112}{32}$ ; C08 F  $\frac{212}{32}$ ; C08 K  $\frac{5}{092}$ ; C08 K  $\frac{5}{12}$ ; C08 K  $\frac{5}{315}$ ; C08 L  $\frac{45}{00}$ ; C08 L  $\frac{67}{02}$ ; C08 L  $\frac{73}{02}$ 

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sec 1			Claima	KMC	Drane D
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	L1	and \$bu	tyl\$m	ethoxyd	libenzoylm	ethan	e					10	

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